#### Cairo Governorate Nozha Directorate of Education **Nozha Language Schools** Ismailia Road



Department : Math Form : 4<sup>th</sup> primary Sheet ( First term) 2015 – 2016

## <u>Unit (1)</u> <u>Hundred Thousands</u>

<b>Remember that</b> : - 10000 is the smallest 5 – digit number.
- 99999 is the greatest 5 – digit number.
- $10234$ is the smallest $5$ – different digit number .
- $98765$ is the greatest $5$ – different digit number .
<b>Notice that</b> : - The smallest $6 - \text{digit number is } \underline{100\ 000}$
- The greatest 6 – digit number is <u>999999</u>
- The smallest different 6 – digit number is <u>102345</u>
- The greatest different 6 – digit number is <u>987654</u>
- The smallest same $6 - \text{digit number is } \underline{111111}$
[1] Write the following numbers in words:
1) 528 301
2) 200 316
3) 101101
4) 104 999
[2] Write the following numbers in digits:
1) Seven hundred thousand, five hundred and ninety three
2) Six hundred thirty thousand, three hundred forty seven
3) Four hundred seventy – two thousand, five hundred thirty
4) Two hundred thirty – five thousand, nine hundred and one

[3] Write the value and the place value of the circled digit:

a) 32 (5) 674 ......b) (5) 74 231 ......

Value

Place value

c) 1 (7) 3 456 ......

### [4] Complete as in the example:

 $\mathbf{E}\mathbf{x} : 136549 = 136\ 000 + 549$  $= 100\ 000 + 30\ 000 + 6000 + 500 + 40 + 9$ 

## [5] Complete as in the example:

**Ex**:  $278\ 925 = 200\ 000 + 70\ 000 + 8000 + 900 + 20 + 5$ 

1) ..... =  $500\ 000 + 30\ 000 + 20 + 1$ 

2) ..... = 70 000 + 900 + 2

3) ..... = 900 000 + 900 + 90 + 9

## [6] Complete:

a) 200 thousands = ..... hundreds

b) 30 000 = ..... Tens

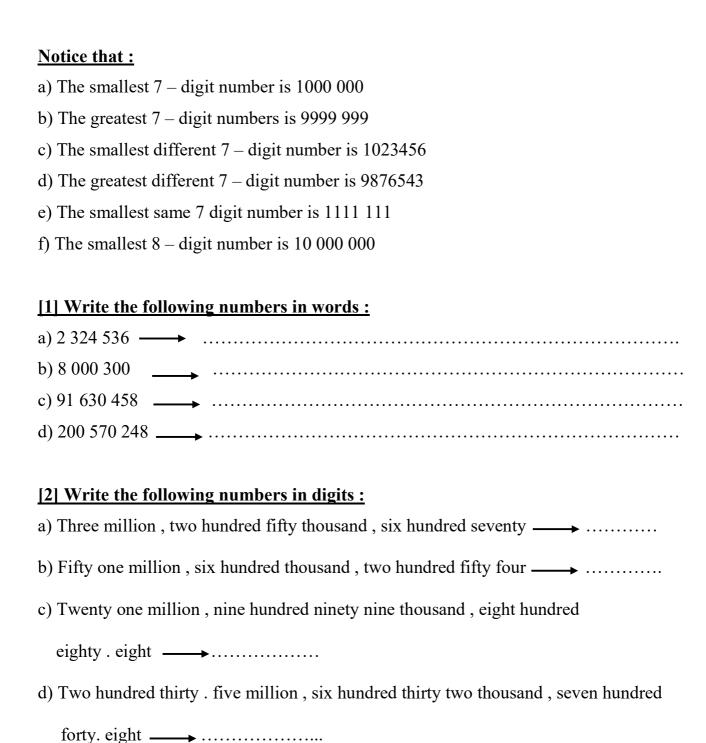
c) 900 000 = ..... Thousands

d) ...... hundreds = 400 thousands



## Lesson (2)

## Millions, Ten millions and hundred millions



## [3] Write the value and the place value of the circled digit :

	Value	Place value
a) 1(3) 125 456		
b) 7 (5)40 102		
c) 6(8)5 134 274		
d) (6)53 301 309		

#### [4] Arrange the following numbers in a descending order:

a) 2 310 009 000 , 210 003 600 , 300 012 400 , 300 102 100	
order:	. <b></b>
b) 235 632, 37 657 204, 350 547 095, 8 999 999	





## Lesson (3)

## Milliards (Billions)

a) 1 123 456 789   b) 2 165 039 283   c) 972 120 000 001   d) 85 005 058 609   [2] Write the following number in digits:  a) Eight milliard, seven hundred nineteen million, six hundred forty five thousand, three
c) 972 120 000 001 → d) 85 005 058 609 →  [2] Write the following number in digits:
d) 85 005 058 609   [2] Write the following number in digits:
[2] Write the following number in digits:
a) Eight milliard , seven hundred nineteen million , six hundred forty five thousand , three
hundred two →
b) Twelve milliard, one hundred million, nine hundred thirty one thousand —
c) Two hundred forty eight milliard, six hundred thirty seven million, one hundred one
thousand, four hundred sixty – seven ——
d) One milliard , two hundred twenty – four —
[3] Write the following numbers as shown in the example:
a) 528 235 101 205 = 528 000 000 000 + 235 000 000 + 101 000 + 205
b) 788 939 265 120 =+++
c) 23 987 140 111 =+++
d) 1 555 612 182 =++++
[4] Put the suitable sign $(<,>$ or $=)$ :
a) 1 211 011 808 1 230 111 001
b) 8 723 400 999 6 823 040 000
c) 1 000 000 000 999 999 999

### Lesson (4) A

### Adding and subtracting large numbers

### [1] Find the result:

## [1] Find the result:

.....

-----

## [2] Find the missing number:

[3] Complete using the shown digits:
5,9,7,6,8,4,0
a) The greatest number =
b) The smallest number =
c) Their sum =
d) Their difference =
[4] Word problems:
a) The population of a city is 3516273 and in another city, the population is 3627563.
find the total population of the two cities.
b) A lamp factory produces 2 356 238 lamps in a month, and 4 355 341 lamps in the nex
month, find the difference between the two months?

## Lesson (4) C

## Multiplying a number by another number

## [1] Find the result:

h) 
$$25 \times 9 \ 66 \times 4 = \dots$$

## [2] Word problem:

a) A man bought 8 metres of cloth for L.E 54 per metre . Find the total cost ?

b) Find the price of 36 kg of oranges if the price per kg is P.T. 635.

## Lesson (4) D

## The division

## [1] Find the result:

- a) 7014 ÷ 7 =.....
- b)  $9200 \div 4 = \dots$
- c) 18905 ÷ 5 = .....
- d) 2323 ÷ 23 = .....
- e) 450 ÷ 15 = .....
- f) 1320 ÷ 11 = .....
- g) 672 ÷ 32 = .....
- h) 625 ÷ 25 = .....
- i) 4158 ÷ 18 = .....
- j) 7296 ÷ 24 = .....
- k) 1462 ÷ 43 = .....

## [2]Complete

When we divide 25 by 6, the quotient = ...... and the remainder = ......

## [2] Put the suitable sign (<,> or =):

- a)  $4 \times 25$   $400 \div 4$
- b) 9500 ÷ 6 9500 ÷ 4
- C) 5025 ÷ 25 2814 ÷ 14

## [3] Word problems:

a) A hotel has 204 rooms, divided equally among a number of floors. each floor has 12 rooms. How many floors are there in the hotel?.....

.....

b) In the beginning of the school year, the teacher distributed 636 books among the	
pupils of the class. the share of each pupil was 12 book. what is the number of the	e
pupils?	
c) Ahmed bought a TV set for L.E 1660, he paid L.E 340 and the rest was divided or	n 24
equal installments. find the value of each installment.	

## Unit 2

## Lesson 1

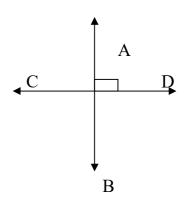
## Relation between two straight lines and geometric constructions

## [1] Perpendicular (orthogonal) straight lines:

- 1) Intersect at one point
- 2) Make four right angles =  $90^{\circ}$

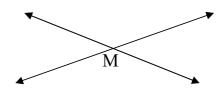
$$\overrightarrow{AB} \perp \overrightarrow{CD}$$
, or  $\overrightarrow{CD} \perp \overrightarrow{AB}$ 

3) AB and CD are also called orthogonal lines



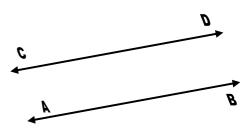
### [2] Two intersecting straight lines:

- 1) Intersect at one point
- 2) M is the intersection point



#### [3] Parallel lines:

2) Intersect at zero point

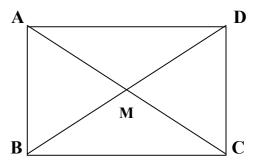


## [1] Complete:

- a) Any two lines that never intersect are called ......
- b) Any two lines that intersect at a point and make four right angles are called ......
- c) The two intersecting lines intersects at ...... Point (s).
- d) The two parallel lines intersects at ..... point (s).
- e) The two parallel lines make ...... angles .
- f) Two lines, if one angle at the intersection point of them is right, then the two lines are called ......
- g) Two lines, if one angle at the intersection point of them is acute, then two lines are called ......

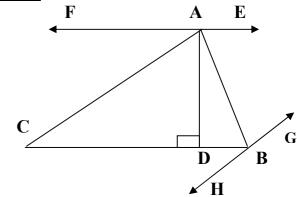
## [3] The opposite figure is a rectangle, complete:

- a)  $\overline{AC}$  intersects  $\overline{BD}$  at .....
- b)  $\overline{AB}$  // .....
- c)  $\overline{BC}$  // .....
- d) <del>DC</del> ⊥ .....
- e) <del>AB</del> ⊥ .....



## [4] In the opposite figure, complete using "// or $\perp$ ":

-) A C	$\stackrel{\longleftarrow}{\wedge}$
a) AC	AB
b) AE	$\overrightarrow{BC}$
c) BH	$\overrightarrow{AB}$
d) AD	<b>CB</b>
e) HB	$\overrightarrow{AC}$
•	$\leftarrow$
f) DA	FE





## Lesson (2) Polygons

## **Definition:**

- The polygon is closed shape formed from three line segment or more .

In any polygon:

The number of sides = The number of angles

= The number of vertices

## Note that

Name	Properties
	* 3 Sides
Triangle	* 3 angles
	* 3 vertices
	* 4 Sides
Quadrilateral	* 4 angles
	* 4 vertices
	* 5 Sides
Pentagon	* 5 angles
	* 5vertices
	* 6 Sides
Hexagon	* 6 angles
	* 6 vertices
	* 7 Sides
Heptagon	* 7 angles
	* 7 vertices
	* 8 Sides
Octagon	* 8 angles
	* 8 vertices

#### Now, we will study some quadrilaterals:

#### [1] The square:

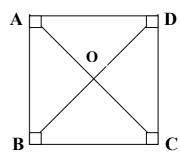
- > All sides are equal in length
- $\triangleright$  All angles are equal in measure = 90° (Right angles)
- > Each two opposite sides are parallel
- > The two diagonals are:
  - a) Bisect each other
  - b) Perpendicular
  - c) Equal in length

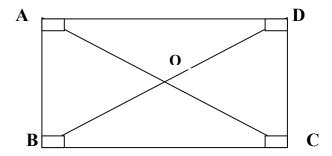
## [2] The rectangle:

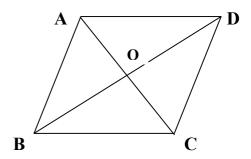
- ➤ Each two opposite sides are equal in length and parallel .
- ➤ All angles are equal in measure = 90°
  ( Right angles )
- > The two diagonals are:.
  - a) Bisect each other
  - b) Equal in length
  - c) Not perpendicular

## [3] The parallelogram:

- ➤ Each two opposite sides are equal In length and parallel .
- > The two diagonals are:
  - a) Bisect each other
  - b) Equal in length
  - c) Not equal in length

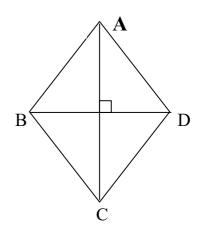






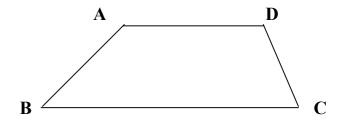
#### [4] The rhombus:

- > All sides are equal in length.
- > Each two opposite sides are parallel
- > The two diagonals are:
  - a) Bisect each other
  - b) Perpendicular
  - c) Not equal in length



## [5] The trapezium:

It has only two opposite sides are parallel and not equal.





[1]	Complete
a)	The polygon

11 complete v
a) The polygon which has 4 sides is called
b) The polygon which has 6 vertices is called
c) The quadrilateral has diagonals .
d) The diagonals of the parallelogram are each other .
e) In the parallelogram, each two opposite sides are and
f) The two diagonals are perpendicular in and
g) The quadrilateral in which only two opposite sides are parallel and not equal in length
is called
h) The hexagon is a polygon sides but the with 3 sides
i) The number of vertices of the hexagon =
j) In the square all angles are Angles
k) The two diagonals of the rectangle are and
1) In the parallelogram, every two opposite sides are and
m) Each two opposite sides are parallel in,,
n) the four sides are equal in length in and
o) The four angles are right in and
p) The two diagonals in and are equal in length and bisect
each other
q) The quadrilateral has diagonals
[2] Draw the rectangle ABCD in which $AB = 3$ cm and $BC = 5$ cm, then find the length
of $\overline{BD}$ and $\overline{AC}$ .

[3] Draw the square ABCD of side length 5 cm . join  $\overline{AC}$  and  $\overline{BD}$  to intersect in M . find the length of  $\overline{BM}$ .

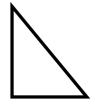
## Lesson 3

## The triangle

## Types of triangle according to their angles:

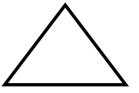
1) Right – angled triangle.

It has one right angle and two acute angles



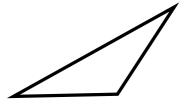
2) Acute – angled triangle

It has three acute angles



3) Obtuse – angled triangle

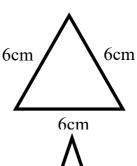
It has one obtuse angle and two acute angles



## > Types of triangle according to their sides :

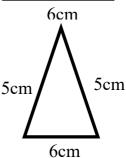
a) Equilateral triangle

It has three sides are equal in length



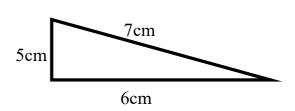
b) Isosceles triangle

It has two sides are equal in length



c) Scalene triangle)

It has three sides are different

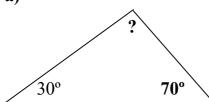


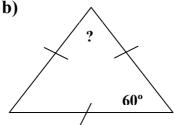
## [1] Complete each of the following:

- 1) Any triangle has at least two ...... angles.
- 2) The scalene triangle is a triangle whose sides are ...... but the ...... triangle is triangle whose sides are equal in length.
- 4) The triangle whose side lengths are 5 cm, 3 cm and 5 cm is called ..... triangle.
- 5) The triangle whose side lengths are 3 cm, 4 cm and 5 cm is called ..... triangle.
- 6) In  $\triangle$  ABC, if m ( $\angle$  B) = 90°, then  $\triangle$  ABC is called ......  $\triangle$ .
- 8)  $m(\angle A) = m(\angle B) = m(\angle C) = 60^{\circ}$
- 9) m ( $\angle L$ ) = 30°, m( $\angle J$ ) = 40°, m( $\angle K$ ) = 110°
- 10) m( $\angle$  S ) = 51°, m( $\angle$ T ) = 67°, m( $\angle$ U ) = 62°
- 11) The triangle is a polygon that has ...... sides and ..... angles

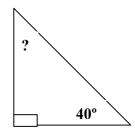
### [2] Find the measure of the angles marked by (?) in each of the following:

a)





C)



[4]: Draw the triangle ABC in which AB = 4 cm, AC = 7 cm,  $m(\angle A)$  = 65 °

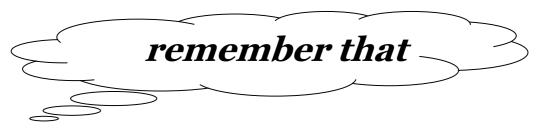
- [5]: Draw the triangle LMN in which LM = 3cm , MN = 4cm , and m( $\angle$ M) = 90 ° , then find :
  - 1) The length of  $\overline{LN}$
  - 2) Perimeter of the triangle
  - 3) Type of the triangle according to its sides
  - 4) Type of the triangle according to its angles

- [6]: Draw triangle ABC in which AB= 6cm , m ( $\angle$  A ) = 50  $^{\rm o}$  , m( $\angle$ B ) = 75  $^{\rm o}$  , then find
  - 1)  $m(\angle C)$
  - 2) Type of triangle according to its sides
  - 3) Type of triangle according to its angles

[7]: Draw the triangle XYZ in which , XZ = 10 cm , m( $\angle$ X) = 30 ° , m( $\angle$ Z) = 60 ° , then find :

- 1) m(∠Y ) \_\_\_
- 2) Length of XZ
- 3) Type of triangle according to its sides
- 4) Type of triangle according to its angles

# الله ذاكرولي في البحث وانض لجروبات ذاكرولي من رياض الاطفال للصف الثالث الاعدادي



- > any two straight lines that never intersect are called parallel
- > any two lines that intersect at a point and make <u>four right</u> angles are called perpendicular
- > the two intersecting lines intersect at one point
- > the two parallel lines intersect at zero point
- > the two intersecting lines make <u>four</u> angles
- the number of sides of any polygon is equal to the number of its vertices and equal to the number of its angles
- > the equilateral triangle is an <u>isosceles</u> triangle
- $\triangleright$  the sum of the measures of the interior angles of any triangle = 180 °
- The equilateral triangle is an <u>acute-angled</u> triangle the measure of each angle is 60 °
- Any triangle has at least two acute angles

## Unit 3 Lesson 1

## **Multiples**

#### [1] Complete:

- b) The multiples of 5 are .....
- c) The multiples of 9 are .....
- d) The common multiples for all number is .....
- e) The multiples of 3 between 10 and 30 are .....
- f) a common multiples for 3, 4 is ......

## Lesson (2)

### **Divisibility**

## [1] Complete with "divisible "or "not divisible":

- a) 40 is ..... by 8
- b) 26 is ..... by 3
- c) 54 is ..... by 4
- d) 27 is ..... by 7

## [2]choose the correct answer

the number ...... is divisible by 3 and 5 together (104, 105. 203)

- b) the number ..... is divisible by 3 (283, 131, 405)
- c) the number ...... is divisible by 5 (5551, 1260, 3333)
- d) ...... is divisible by both 2 and 3 (15, 10, 42)
- e) (511 + .....) is divisible by 5 (1, 4, 3)

## Lesson 3 A

## The factors

[1] Complete:	
a) The factors of 12 are	
b) The factors of 6 are	
c) The number of factors of 15 are,	
d) The number 11 has factors	
[2] Choose the correct answer:	
a) 2 is a factor of	(37,591,238)
b) 3 is a factor of	(37,222,56)
c) 5 is a factor of	(721,385,127)
d) is a factor of 6.	(0,3,12)
e) Is a factor of 10.	(4,5,40)
f) 2 and 3 are factors of	(702,314,250)
g) 2 and 5 are factors of	(155, 110, 552)
h) The number 9 has only factors	(2,3,4)
i) is a factor of all numbers	(0,1,2)

## Lesson 3 B

## **Prime numbers**

## [1] Complete:

a) The smallest prime number is
c) The smallest odd prime number is
d) The only even prime number is
e) The prime number has only factors .
f) The prime numbers between 20 and 30 are
h) The number 21 is a Number .
i) 1 is not prime number because
j) all prime number are odd except
k) any prime number has only factors and they are and
1) 15 is not prime number because
m)7 is prime number because

## Remember that

## **Multiples**

- 1) The multiples of 2 are the numbers whose units digit is 0, 2, 4, 6 or 8 which are called the even numbers.
  - 2) The multiples of 5 are the numbers whose units digit is 0 or 5.
  - 3) The multiples of 10 are the numbers whose units digit is  $\underline{0}$ .
  - 4) Zero is a multiple of any number.
  - 5) Each number is a multiple of itself.
  - 6) All the multiples of both 2 and 3 are the multiple of 6.
  - 7) All the multiples of both 2 and 5 are the multiples of 10.
  - 8) All the multiples of both 3 and 5 are the multiples of 15.

## **Divisibility**

#### **Notes:**

- 1) All the multiples of a number are divisible by this number.
- 2) A number is divisible by 2 if it is an <u>even</u> number.
- 3) A number is divisible by 3 if the sum of its digits is divisible by 3.
- 4) A number is divisible by 5 if its unit digit is  $\underline{0}$  or  $\underline{5}$ .
- 5) A number is divisible by 4, if the units and tens digit form a number divisible by 4
- 6) A number is divisible by 6, if it is divisible by both 2 and 3.
- 7) A number is divisible by 10, if its units digit is  $\underline{0}$ .

## **Prime numbers**

#### **Notes:**

- 1) 1 is not a prime number because it has only one factor.
- 2) All the prime numbers are odd except  $\underline{2}$ .
- 3)  $\underline{2}$  is the smallest prime number.
- 4)  $\underline{2}$  is the only even prime number.
- 5) The prime number is divisible only by 1 and itself.

## The factors

- **Notes**: 1) the common factor of all numbers is <u>one</u>.
  - 2) Each number is a factor of itself
  - 3) Any number is divisible by <u>1</u> and <u>itself</u>.

## Lesson 3 C

## Factorization of a number to its prime factors.

## [1] Complete as in the example:

a) 12

12 = .....

d)

25=.....

## [2] Complete:

- a) The prime factors of 6 are ......
- b) The prime factors of 10 are .....

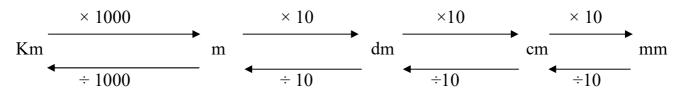


[2] Find the H.C.F and	The L.C.M of each of the following groups of numbers:
a) 12 and 14	b) 18, 20
c) 14, 21 and 35	d) 24, 36
e) 20 and 24	f) 20 and 32
g) 18 and 28	h) 12 and 18
i) 15 and 21	j) 18 and 27

## Unit 4

## **Lesson 1 Lengths**

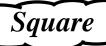
#### **Notes:**



- To convert a big unit to a small unit, multiply.
- To convert a small unit to a big unit, divide.

## Definition:

- The perimeter of any polygon equals the sum of its side lengths.



Perimeter = side x = 4

Side = perimeter  $\div 4$ 

The area of a square = side length  $\times$  side length

$$= S \times S$$



Perimeter= (length + width) x 2

Width = (perimeter  $\div 2$ ) - length

Length =  $(perimeter \div 2) - width$ 

 $\triangleright$  The area of a rectangle = length  $\times$  width

$$= L \times W$$

$$ightharpoonup$$
 Length =  $\frac{Area}{Width}$  , width =  $\frac{Area}{Length}$ 

→ The length and the width of the rectangle are called the dimensions of the rectangle.

30

111	Complete	
ш	Complete	•

- a)  $5 \text{ m} = \dots \dots \text{ cm}$
- b) ..... m = 600 cm
- c)  $8 \text{ m} = \dots \text{mm}$
- d)  $8 \text{ km} = \dots m$
- e) ...... dm = 40 cm
- f) ..... km = 2000 m
- g) 5 dm = ..... cm
- h)  $7000 \text{ m} = \dots \text{km}$
- i) 600 mm = .....cm

## [2] Put the suitable sign (<,> or =):

- b) 30 dm 3 m
- d) 3 m 2500 cm
- e) 4 km 400 m
- f) 8 dm 80 cm

## [3] Complete:

- c) The perimeter of a square of side length 6 cm = ..... cm
- e) The perimeter of a rectangle with length 5 cm and width 3 cm is ..... cm
- g) The side length of the square whose perimeter 24 cm is .....
- [4] Find the perimeter of a rectangle which its length is 5 cm and its width is 3 cm.

.....

[5] Calculate the side length of a square whose perimeter is 36 cm.

.....

## Lesson 2

### **Areas**

#### **Definition:**

The area of any geometric figure is the number of the equal parts forming that figure.

#### **Notes:**

### [1] Complete:

- a)  $40 \text{ dm}^2 = \dots \text{Cm}^2$
- b)  $2500 \text{ dm}^2 = \dots \text{ m}^2$
- c)  $3 \text{ cm}^2 = \dots \text{mm}^2$
- d)  $5 \text{ m}^2 = \dots \text{dm}^2$
- e)  $90000 \text{ cm}^2 = \dots \text{m}^2$

## 2)Put > , < or =

- a)  $5 \text{ m}^2$  ......  $50 \text{ dm}^2$
- b) 9 m<sup>2</sup> ...... 900 cm<sup>2</sup>
- c) 3 dm<sup>2</sup> ...... 3000 cm<sup>2</sup>

## 3)Complete

- a) The area of the square of side length 3 cm = ......
- b) A rectangle its length 5 cm and its width 4 cm, then its area = ........
- **4)** rectangle of length 6 cm and width 4 cm find its perimeter and its area

.....

5) find the area and the perimeter of a square whose side length is 10 cm

.....